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Early career job quality of racialized Canadian graduates with a bachelor's degree, 2014 to 2017 cohorts

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Overview of the study

Racialized individuals are generally more likely than their non-racialized and non-Indigenous counterparts to pursue a university-level education. Despite this, their labour market outcomes are often less favourable. Using data from the integrated file of the Postsecondary Student Information System, the 2016 Census and the T1 Family File, this article compares the employment earnings, unionization rate and pension plan coverage rate of racialized graduates with a bachelor's degree with those of non-racialized and non-Indigenous graduates, two years after graduation.

- Approximately 30% of graduates with a bachelor's degree from Canadian educational institutions from 2014 to 2017 were from a racialized group. Chinese, South Asian and Black graduates made up nearly two-thirds of racialized graduates.
- Two years after graduation, most racialized graduates reported lower employment earnings than their non-racialized and non-Indigenous counterparts. Once the differences in demographic, education and industry characteristics were taken into account, West Asian and Arab women had the highest income gaps, earning 16% and 15% less, respectively, than non-racialized and non-Indigenous women. Black, Korean, South Asian and Latin American female graduates followed, with employment incomes that were 8% to 9% lower than those of their non-racialized and non-Indigenous female counterparts.
- Among men, Black, Southeast Asian, Filipino, Chinese and Korean graduates had the lowest employment incomes after taking into account all their characteristics, earning on average between 11% and 13% less than their non-racialized and non-Indigenous counterparts. South Asian and Arab graduates followed, earning 6% less than their non-racialized and non-Indigenous counterparts.
- Graduates from most racialized groups reported lower unionization rates than those of non-racialized and non-Indigenous graduates. However, these differences largely disappeared when all the graduate characteristics were taken into account. Among women, only Japanese, Arab and Chinese graduates had lower unionization rates than their non-racialized and non-Indigenous counterparts. Among men, only Korean and Chinese graduates had lower unionization rates.
- In contrast, among men, Black, Filipino and South Asian graduates had higher unionization rates than non-racialized and non-Indigenous graduates, even after controlling for their characteristics.
- Most racialized graduates had lower rates of employer pension plan coverage than their non-racialized and non-Indigenous counterparts, among both women and men. However, these differences tended to disappear when the graduates' characteristics were taken into account. Among women, only West Asian, Arab, Latin American and Black graduates had lower coverage rates than non-racialized and non-Indigenous graduates. Among men, this was the case for Chinese graduates only.

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Introduction

Racialized individuals are generally more likely than non-racialized and non-Indigenous individuals to pursue a university-level education. Despite this, their labour market outcomes are often less favourable.¹ Racialized individuals are those who belong to groups designated as visible minorities. As such, they are part of the groups covered by the *Employment Equity Act*, which aims to achieve equality in the workplace by correcting certain disadvantages that these groups may experience in the area of employment.²

A number of factors can explain the generally poorer labour market outcomes of racialized workers, such as discrimination in hiring practices,³ lower proficiency in Canada's official languages or issues related to the recognition of degrees earned abroad.⁴ This article examines the quality of the jobs of racialized graduates with a bachelor's degree at the beginning of their careers, namely two years after graduation. Specifically, are racialized individuals who have recently graduated with a bachelor's degree in Canada achieving labour market outcomes that are comparable to those of their non-racialized and non-Indigenous counterparts? Are they able to find jobs that are equally as good two years after graduation?

Using a database that integrates anonymized data from the Postsecondary Student Information System (PSIS) with data from the 2016 Census⁵ and the TI Family File (TIFF), this article compares for the first time some of the labour market indicators of graduates with a bachelor's degree belonging to each of the 10 racialized population groups⁶ with those of non-racialized and non-Indigenous

graduates.⁷ This was made possible after combining four cohorts of graduates with bachelor's degrees from the PSIS–TIFF–Census file: those from 2014 to 2017.⁸ The article first profiles graduates and then compares the employment income and rates of union dues payments and contributions to an employer pension plan⁹ of racialized graduates and non-racialized and non-Indigenous graduates. The results of this study include only graduates who were employed two years after graduation (for all the selection criteria, please see the text box [Data sources, methods and definitions](#)).

The unique database used in this study makes it possible to examine the transition into the labour market of graduates with a bachelor's degree from Canadian postsecondary institutions and compare their labour market outcomes after graduation. This type of universe is similar to the one from the National Graduates Survey (NGS), but covers a larger sample, making it possible to examine certain groups within the population, such as racialized individuals. Thus, this article allows for an understanding of issues related to the labour market integration of racialized postsecondary graduates (excluding international students), in addition to demonstrating the analytical potential of the Education and Labour Market Longitudinal Platform (ELMLP), which was designed to combine the PSIS administrative file with other data files.

A number of studies on racialized people exclude immigrants in order to prevent issues associated with diploma recognition, the ability to speak either of Canada's official languages and weaker networking.¹⁰ These issues are less present or even

non-existent for the graduates in this study because they all earned their bachelor's degree at a Canadian educational institution and all studied in one of the official languages. Therefore, this study pertains to all graduates with a bachelor's degree from 2014 to 2017 who are Canadian-born, immigrants, or permanent residents.

South Asian, Chinese and Black populations accounted for largest share of racialized graduates among bachelor's degree holders

The number of individuals belonging to a racialized group has been steadily increasing in Canada since 1996. This largely reflects the greater diversity in the source countries of immigrants in recent decades. In 2016, racialized people accounted for more than one-fifth of Canada's population (22%), and this proportion could reach between 38% and 43% by 2041.¹¹

Between 2014 and 2017, 395,000¹² graduates¹³ earned a bachelor's degree from a Canadian educational institution or about 99,000 people annually (Table 1). The majority of these graduates (70%) did not belong to a racialized or Indigenous group. However, the proportion of non-racialized and non-Indigenous graduates with a bachelor's degree was lower than the proportion that this group represents in the Canadian population aged 25 to 34 (72%). This result reflects the lower likelihood of non-racialized and non-Indigenous individuals, compared with racialized individuals, earning a university degree.¹⁴ In fact, according to the 2016 Census, 44% of Canadians aged 25 to 54 belonging to a racialized group had a certificate, diploma or degree at the

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Table 1

Distribution of graduates with a bachelor's degree from 2014 to 2017 and of the Canadian population aged 25 to 34 in 2016, by population group

Population group	Graduates with a bachelor's degree from 2014 to 2017	Canadian population aged 25 to 34 (ref.)	
		number	percentage
Total	395,000	4,340,000	
South Asian ¹	7.7		7.5
Chinese	8.7*		5.5
Black	3.7*		4.2
Filipino	2.0*		2.6
Latin American	1.2*		1.9
Arab	1.9		2.0
Southeast Asian ²	1.2		1.2
West Asian ³	1.0*		1.2
Korean	1.1*		0.7
Japanese	0.3		0.3
Other	0.4		0.5
Multiple	1.1*		0.7
Not part of a racialized group or Indigenous group	69.8*		71.8

* significantly different from reference category (ref.) ($p < 0.05$)

1. The South Asian population group is made up of East Indians, Pakistanis and Sri Lankans.

2. The Southeast Asian population group is made up of Vietnamese, Cambodians, Malaysians and Laotians.

3. The West Asian population group is made up of Azerbaijanis, Iranians, Afghans and Uzbeks.

Note: Variances were calculated using bootstrap weights.

Sources: Statistics Canada, integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts, and 2016 Census.

bachelor level or higher, compared with 27% for non-racialized and non-Indigenous Canadians.¹⁵

The three racialized groups representing the largest share of graduates with a bachelor's degree were the same three groups that made up the largest share of the total population, namely Chinese, South Asian¹⁶ and Black, accounting for 9%, 8% and 4% of graduates, respectively. Chinese people were also more likely to earn a bachelor's degree than individuals not belonging to a racialized or Indigenous group. In fact, 9% of graduates with a bachelor's degree were Chinese; whereas this group accounted for only 6% of the Canadian population aged 25 to 34. Black people and South Asian people made up a comparable share of graduates and people aged 25 to 34 in Canada (4% and 8%, respectively).

Graduates from other racialized groups represented between 0.3% and 2% of all graduates.

Graduates from most Asian groups were younger at graduation

From this section onward, graduates who were unemployed and self-employed two years after graduation are excluded. The following analysis therefore focuses only on graduates who were employed two years after graduation.

As established in an earlier article,^{17,18} racialized graduates have different socio-demographic characteristics than those who do not belong to a racialized or Indigenous group. Among graduates not belonging to a racialized or Indigenous group, 6 out of 10 were women (61%) (Table 2). Reflecting the diversity of racialized

groups, this proportion ranged from 51% among South Asian graduates to 64% among Black and Latin American graduates.

The average age at graduation with a bachelor's degree varied considerably across the groups. Asian graduates were generally younger upon graduation. For example, Chinese, Southeast Asian, South Asian and Filipino graduates earned their bachelor's degree at around age 25, compared with age 26 for non-racialized and non-Indigenous graduates, age 27 for Latin American and Arab graduates, and age 29 for Black graduates. Earning a degree at a relatively older age has a number of implications for graduates' transition into adulthood, such as finding a job, starting a family and buying a home. This can even have an impact on their retirement age.

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Table 2
Characteristics of graduates with a bachelor's degree, two years after graduation, by population group, graduates from 2014 to 2017¹

Population group	Average age at graduation year	Proportion of women	Proportion of immigrants	Presence of children in the household	Distribution by region of residence				
					Ontario	British Columbia	Prairies	Quebec	Other regions ²
South Asian	24.9**	51.2**	50.3**	7.9**	68.7**	16.5**	10.6**	3.6**	0.5**
Chinese	24.5**	53.5**	48.2**	5.2**	50.5**	30.9**	12.1**	5.8**	0.7**
Black	29.0**	64.0**	50.5**	30.0**	57.3**	3.0**	13.2**	24.0	2.5**
Filipino	24.9**	60.9	55.4**	6.7**	50.7**	21.4**	24.2**	3.0**	0.6**
Latin American	27.2**	63.5	64.4**	19.2**	49.9**	8.0**	15.0**	25.7	1.3**
Arab	26.8**	53.0**	67.0**	19.5**	50.7**	3.3**	8.9**	34.3**	2.7**
Southeast Asian	24.9**	56.8*	22.7**	7.1**	48.6**	14.8**	17.5	18.0**	1.0**
West Asian	26.9**	56.8*	81.4**	12.9	59.6**	19.8**	9.3**	9.7**	1.6**
Korean	25.3**	52.7**	79.0**	6.3**	55.1**	28.7**	13.5**	F	F
Japanese	25.7	57.8	9.2*	7.3**	33.0	38.5**	22.0	F	F
Not part of a racialized group or Indigenous group (ref.)	25.9	60.6	5.6	14.1	37.8	11.2	18.9	24.4	7.7

F too unreliable to be published

* significantly different from reference category (ref.) ($p < 0.05$)

** significantly different from reference category (ref.) ($p < 0.01$)

1. The values in this table are slightly different from those published in Brunet and Galarneau (2022) because the "non-racialized" group excludes Indigenous people. In addition, self-employed workers were removed from the universe of this table, which therefore deals only with employees, to be consistent with the universe of the rest of the tables in this article.

2. The other regions are made up of the Atlantic provinces and the territories.

Note: Variances were calculated using bootstrap weights.

Sources: Statistics Canada, integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts.

A significant proportion of racialized graduates were immigrants.^{19,20} This was the case for over 50% of all racialized graduates, compared with 6% of non-racialized and non-Indigenous graduates. Also, the proportion of immigrants varied significantly across the groups, ranging from 9% for Japanese graduates to 81% among West Asian graduates.

Reflecting their older graduating age, 30% of Black graduates had at least one dependent child two years after graduating, compared with 8% or less of graduates from most Asian groups and 14% of non-racialized and non-Indigenous graduates. A significant proportion of Arab (20%) and Latin American (19%) graduates also had at least one dependent child.

Racialized graduates were generally more likely to live in Ontario and British Columbia and less likely to live in the Prairies and Quebec. For example, South Asian graduates (69%) were nearly twice as likely to live in Ontario than non-racialized and non-Indigenous graduates (38%). However, South Asian graduates were six times less likely to live in Quebec (4%) than their non-racialized and non-Indigenous counterparts (24%).

Asian graduates were more likely to have graduated in a scientific field

Racialized graduates earned their bachelor's degrees in fields of study that were often different from those of their non-racialized and non-Indigenous counterparts (Table 3).

Among women, the field of business, management and public administration was the most popular for a number of racialized groups, namely among Southeast Asian (34%), Chinese (33%) and South Asian (30%) graduates. In comparison, 21% of non-racialized and non-Indigenous female graduates earned their degree in this field. It is also interesting to note that the field of science, including physical and life sciences and technologies; mathematics, computer and information sciences; and architecture, engineering and related technologies, which was less popular among non-racialized and non-Indigenous women (8%), was significantly more common among Arab (19%), Chinese (16%) and Korean (16%) female graduates. In contrast, the field of education, which was most popular among non-

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racialized and non-Indigenous female graduates (18%), was the lowest among most racialized groups.

The field of science and that of business, management and public administration were among the most popular for racialized men and non-racialized and non-Indigenous men. These fields were more common among certain racialized groups, such as Arab (76%), South Asian (73%), Chinese and West Asian

(71%) graduates, compared with 58% of non-racialized and non-Indigenous graduates.

Employment incomes of racialized graduates often lower than non-racialized and non-Indigenous graduates

In general, the annual employment income²¹ reported two years after graduation was higher for non-

racialized and non-Indigenous graduates compared to graduates from most racialized groups. It was also higher among men than women for both racialized and non-racialized and non-Indigenous graduates.

In fact, employment income averaged \$47,800 and \$45,700 for non-racialized and non-Indigenous women and racialized women, respectively, compared with \$54,100 and \$51,600 for non-racialized and non-Indigenous men and racialized men, respectively.

Table 3
Distribution of graduates with a bachelor's degree, by field of study and population group, graduates from 2014 to 2017

Population group	Education	Social and behavioural sciences and law	Business, management and public administration	Science ¹	Health	Other ²
	percentage					
women						
South Asian	7.8**	22.2**	29.8**	13.1**	18.5**	8.6**
Chinese	5.4**	18.6	33.3**	16.3**	14.2**	12.1*
Black	9.0**	29.5**	20.8	6.6	24.5**	9.5**
Filipino	5.9**	17.7	18.9	11.0**	34.5**	12.0
Latin American	9.0**	25.8**	26.1**	8.3	18.2*	13.0
Arab	14.5*	22.4*	27.6**	18.9**	9.4**	7.3**
Southeast Asian	6.0**	18.1	33.9**	12.0**	20.7	9.2**
West Asian	7.8**	24.9**	25.8*	13.0**	17.0*	12.0
Korean	7.5**	22.5	18.0	16.0**	19.0	16.6*
Japanese	8.0**	21.0	19.0	12.0	27.8	12.0
Not part of a racialized group or Indigenous group (ref.)	17.5	18.9	20.8	7.6	21.8	13.4
men						
South Asian	1.7**	14.3	38.2**	34.6**	5.0*	6.2**
Chinese	2.0**	13.4*	32.2**	38.3**	5.7	8.4**
Black	5.1**	22.3**	31.3*	22.3**	9.2**	9.9**
Filipino	2.4**	14.0	22.5**	32.3	18.3**	10.0*
Latin American	3.0**	19.0*	28.8	32.6	5.0	12.0
Arab	3.6**	13.2	28.4	47.3**	4.4	3.1**
Southeast Asian	3.0**	10.4**	33.9**	35.4*	10.0**	7.9**
West Asian	F	20.4*	30.8	39.9**	F	4.4**
Korean	2.8**	19.0	27.4	37.0**	4.6	10.0*
Japanese	F	21.0	29.0	21.0	F	17.0
Not part of a racialized group or Indigenous group (ref.)	8.2	15.2	27.7	29.8	6.0	13.1

F too unreliable to be published

* significantly different from reference category (ref.) ($p < 0.05$)

** significantly different from reference category (ref.) ($p < 0.01$)

1. The science field includes physical and life sciences and technologies; mathematics, computer and information sciences; and architecture, engineering and related technologies.

2. The other sectors are made up of visual and performing arts, and communications technologies; humanities; agriculture, natural resources and conservation; personal, protective and transportation services; and other fields.

Note: The values presented in this table are slightly different from those published in Brunet and Galarneau (2022) because the "non-racialized" group excludes Indigenous people. In addition, self-employed workers were removed from the universe of this table, which therefore deals only with employees, to be consistent with the universe of the rest of the tables in this article. Variances were calculated using bootstrap weights.

Sources: Statistics Canada, integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts.

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Among women, Arab (\$41,100) and West Asian (\$42,700) graduates had the lowest employment incomes, earning 14% and 11% less, respectively, than non-racialized and non-Indigenous graduates (Table 4). Korean (\$43,300), Latin American (\$43,600) and Black (\$44,400) female graduates earned 7% to 9% less than their non-racialized and non-Indigenous counterparts.

Among men, Filipino graduates (\$47,800) had the lowest employment incomes, earning on average 12% less than non-racialized and non-Indigenous graduates. Southeast Asian (\$49,200), Korean (\$49,400), Black (\$49,800) and Latin American (\$50,300) graduates followed, with differences reaching between 7% and 9%. Chinese graduates (\$51,800) closed the gap, with a 4% difference in employment income.

The income gaps may be due to differences in characteristics of graduates belonging to the various racialized groups. To take these differences into account, linear regression models were estimated. In the first model, demographic characteristics (racialized group, age, region of residence, immigrant status and the presence of dependent children) and those pertaining to education (graduation year and field of study) were included. This eliminates the effect of employment income differences attributable to demographic and educational characteristics of graduates.

In the second model, the industry sector of graduates' employment was also considered. This eliminates the effect of income gaps associated with wage differences by industry. For example, wages are, on average, lower in accommodation and food services than in the utilities sector. However, including the industry sector may reduce the observed employment income gap between racialized groups and the non-racialized and non-Indigenous group. This could be due to potential discrimination by employers, as some industry sectors with good pay and employment conditions may be more difficult for some racialized groups to access.²² Including the variables in two stages helps isolate the effect of adding just the industry sector.

Taking all these factors into account makes it possible to answer the following question: When the characteristics of racialized graduates are comparable to those of their non-racialized and non-Indigenous counterparts, do income gaps persist? If yes, the remaining gaps may be due to a variety of factors that cannot be considered with the current data, including occupation; size of the company; and unobservable characteristics such as motivation, talent, as well as racial inequities and discrimination.

The data show that among women, income gaps persist for 6 of the 10 racialized groups when all the

graduate characteristics are taken into account (Model 2). The largest adjusted income gaps between racialized and non-racialized and non-Indigenous women were recorded for West Asian (-16%) and Arab (-15%) graduates. Also, Black, Korean, South Asian and Latin American female graduates earned between 8% and 9% less than non-racialized and non-Indigenous female graduates. Lastly, the average employment income of Chinese, Filipino, Southeast Asian and Japanese women was not significantly different from that of non-racialized and non-Indigenous women.²³

Among men, 7 out of 10 racialized groups had lower employment earnings than their non-racialized and non-Indigenous counterparts after controlling for differences in the overall characteristics of graduates. Black (-13%), Southeast Asian (-13%), Filipino (-12%), Chinese (-11%) and Korean (-11%) graduates reported the largest income gaps. South Asian and Arab graduates earned 6% less than non-racialized and non-Indigenous graduates. Latin American, West Asian and Japanese graduates had no significant income gaps compared with non-racialized and non-Indigenous men.

Adding the industry sector did little to change the results for both women and men. The income gaps for the same groups remained significant and of a similar magnitude.

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Table 4

Average employment income¹ and employment income gaps (unadjusted and adjusted gaps) of graduates with a bachelor's degree, two years after graduation, by population group, graduates from 2014 to 2017

Population group	Average employment income	Unadjusted gap	Adjusted gap ² (Model 1)	Adjusted gap ³ (Model 2)
	2016 constant dollars	percent difference		
		women		
South Asian	45,400	-5.0**	-6.5**	-8.5**
Chinese	47,700	-0.2	-1.3	-1.8
Black	44,400	-7.1**	-8.0**	-8.9**
Filipino	48,200	0.8	-2.2	-2.3
Latin American	43,600	-8.8**	-7.7**	-8.4**
Arab	41,100	-14.0**	-13.1**	-14.6**
Southeast Asian	47,300	-1.0	-0.2	-0.4
West Asian	42,700	-10.7**	-16.1**	-15.7**
Korean	43,300	-9.4**	-10.3**	-8.9**
Japanese	48,900	2.3	-6.0	-5.5
Not part of a racialized group or Indigenous group (ref.)	47,800	...	...	...
		men		
South Asian	53,000	-2.0	-5.7**	-6.3**
Chinese	51,800	-4.3**	-11.8**	-11.0**
Black	49,800	-7.9**	-12.9**	-13.3**
Filipino	47,800	-11.6**	-13.7**	-12.1**
Latin American	50,300	-7.0**	-5.3	-5.2
Arab	53,900	-0.4	-5.7*	-5.5*
Southeast Asian	49,200	-9.1**	-14.2**	-13.1**
West Asian	54,200	0.2	-3.8	-3.9
Korean	49,400	-8.7**	-13.6**	-10.7**
Japanese	48,900	-9.6	-11.5	-6.6
Not part of a racialized group or Indigenous group (ref.)	54,100	...	...	...

... not applicable

* significantly different from reference category (ref.) ($p < 0.05$)

** significantly different from reference category (ref.) ($p < 0.01$)

1. Average employment income is annual income derived from the T1 Family File. It includes salaries and wages and excludes incomes of zero and over \$500,000. Incomes are adjusted for inflation and are presented in 2016 dollars.

2. The Model 1 adjusted gaps were calculated using a linear regression model, taking into account demographic and educational characteristics, namely graduation year, field of study, immigrant status, region of residence, age, population group and the presence of children. Separate models were estimated for men and women.

3. The Model 2 adjusted gaps were calculated using a linear regression model with all the characteristics of Model 1, to which the industry sector (NAICS code) was added.

Note: Variances were calculated using bootstrap weights.

Sources: Statistics Canada, integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts.

Racialized graduates generally have lower unionization rates than non-racialized and non-Indigenous graduates

Another indicator associated with job quality is unionization rate. For this study, the unionization rate is the proportion of employed graduates who paid union dues two years after graduation.²⁴

In general, the unionization rate of women was higher than that of men (Table 5). This is attributable to women being more likely to hold positions in the public sector, namely jobs in the fields of education, health and public service. Jobs in these sectors are more commonly covered by a collective agreement compared to jobs in the private sector. This increased propensity for women to work in the public sector was also

observed among female graduates with a bachelor's degree. In fact, 52% of female graduates with a bachelor's degree held a position in the public sector, compared with 23% of their male counterparts.

This is reflected in the unionization rates. Among non-racialized and non-Indigenous graduates, 53% of employed women had paid union dues two years after graduation compared with 31% of their male

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counterparts. A similar pattern was also observed within each racialized group.

Among racialized female graduates, all groups except Black graduates (53%) had significantly lower unionization rates than that of non-racialized and non-Indigenous female graduates (53%). In addition, the lowest unionization rates were among Chinese (30%) and West

Asian (36%) female graduates. In general, female graduates from the groups with the lowest unionization rates were also less likely to work in the public sector (i.e., education, health and public service). For example, 30% of Chinese female graduates and 39% of West Asian female graduates were employed in the public sector, compared with 52% of non-racialized and non-Indigenous graduates.

However, most of the differences in unionization disappeared after considering differences in female graduates' characteristics. Only Japanese (-7 percentage points), Arab (-5 percentage points) and Chinese (-2 percentage points) female graduates maintained a significant difference compared with non-racialized and non-Indigenous graduates.

Table 5
Unionization rate¹ of graduates with a bachelor's degree, two years after graduation, by population group, graduates from 2014 to 2017

Population group	Unionization rate	Unadjusted gap	Adjusted gap ² (Model 1)	Adjusted gap ³ (Model 2)
	percentage	percentage point difference		
women				
South Asian	38.9	-14.2**	1.7	0.3
Chinese	30.0	-22.9**	-4.4**	-2.0**
Black	52.6	-0.4	5.0**	1.5
Filipino	48.9	-4.1*	2.4	0.9
Latin American	44.8	-8.2**	2.0	0.6
Arab	37.3	-15.7**	-3.3*	-4.6**
Southeast Asian	37.4	-15.4**	-3.7*	-2.4
West Asian	35.5	-17.4**	-3.0	-2.5
Korean	37.9	-15.1**	-0.8	-0.2
Japanese	41.0	-11.7**	-8.1*	-6.6*
Not part of a racialized group or Indigenous group (ref.)	53.0	...	...	...
men				
South Asian	22.6	-8.2**	4.5**	3.0**
Chinese	17.5	-13.3**	-2.9**	-2.7**
Black	41.9	11.1**	11.3**	7.6**
Filipino	35.4	4.6*	10.3**	6.0**
Latin American	30.6	-0.2	3.8	1.7
Arab	26.8	-4.0*	1.5	-0.4
Southeast Asian	23.0	-8.1**	-1.3	-0.9
West Asian	18.0	-12.9**	-3.0	-1.8
Korean	16.0	-14.6**	-5.0*	-6.0**
Japanese	24.0	-6.4	-3.6	-2.4
Not part of a racialized group or Indigenous group (ref.)	30.8	...	...	...

... not applicable

* significantly different from reference category (ref.) (p < 0.05)

** significantly different from reference category (ref) (p < 0.01)

1. The unionization rate is the proportion of graduates who reported union dues on their tax return, two years after graduation.

2. The Model 1 adjusted gaps were calculated using a logistic regression model estimating the likelihood of being unionized (yes or no), taking into account the graduates' characteristics, namely age, graduation year, field of study, immigrant status, region of residence, population group and the presence of children. Separate models were estimated for men and women.

3. The Model 2 adjusted gaps were calculated using a logistic regression model with all the characteristics of Model 1, to which the industry sector (NAICS code) was added.

Note: Variances were calculated using bootstrap weights.

Sources: Statistics Canada, Integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts.

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Among men, racialized graduates also had generally lower unionization rates than non-racialized and non-Indigenous graduates. Once graduate characteristics were considered, 5 in 10 racialized groups still had significant differences in their unionization rate compared with non-racialized and non-Indigenous graduates. Korean and Chinese graduates maintained a lower unionization rate than non-racialized and non-Indigenous graduates, with differences of -6 and -3 percentage points, respectively. In contrast, Black, Filipino and South Asian graduates had higher unionization rates than non-racialized and non-Indigenous graduates, with differences of +8, +6 and +3 percentage points, respectively.

The high unionization rates among Black and Filipino graduates may be partly explained by the fact that these two racialized groups were

more likely to hold public sector jobs (33% and 29%, respectively, versus 23% of non-racialized and non-Indigenous graduates, based on unadjusted data), with the latter being more common in the health and public service industries.

These high unionization rates were observed despite relatively low wages for these two groups compared with their non-racialized counterparts. However, the lower wages may be partly related to the fact that these groups were more likely to be overqualified. This hypothesis was tested for the 2014 graduates (whose employment characteristics could be observed in the 2016 Census), and the results showed that Black and Filipino graduates were indeed more likely to be overqualified, specifically holding a high school level position while having a bachelor's degree.

Other recent studies²⁵ also highlight Black people's disadvantage in the labour market.

Most racialized groups had lower employer pension plan coverage rates than non-racialized and non-Indigenous graduates

The employer pension plan (EPP) coverage rate is derived from the TI Family File, from the pension adjustment, which indicates whether contributions to an EPP have been made on behalf of each employee, by the employees and/or the employers.²⁶ Among graduates not belonging to a racialized or Indigenous group, this rate was 58% for women and 46% for men (Table 6). As was the case for the unionization rate, women in each of the 10 racialized groups were also more likely than men to be covered by an EPP.

Table 6
Employer pension plan (EPP) coverage rate¹ of graduates with a bachelor's degree, two years after graduation, by population group, graduates from 2014 to 2017

Population group	EPP coverage rate	Unadjusted gap	Adjusted gap ²	Adjusted gap ³
	percentage	percentage point difference		
		women		
South Asian	47.6	-10.1**	2.8**	-0.2
Chinese	42.0	-15.6**	-0.7	-0.4
Black	52.8	-4.9**	-0.1	-2.4*
Filipino	50.5	-7.2**	1.4	0.6
Latin American	46.7	-11.0**	-3.1	-3.7*
Arab	48.9	-8.8**	-1.8	-4.8**
Southeast Asian	47.9	-9.6**	-1.2	-1.5
West Asian	40.7	-16.9**	-4.6	-4.9*
Korean	43.0	-14.8**	-0.2	-0.1
Japanese	47.0	-10.8*	-4.7	-2.1
Not part of a racialized group or Indigenous group (ref.)	57.7

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Table 6
Employer pension plan (EPP) coverage rate¹ of graduates with a bachelor's degree, two years after graduation, by population group, graduates from 2014 to 2017

Population group	EPP coverage rate	Unadjusted gap	Adjusted gap ² (Model 1)	Adjusted gap ³ (Model 2)
	percentage	percentage point difference		
		men		
South Asian	40.3	-5.7**	2.2*	-0.1
Chinese	35.7	-10.2**	-1.1	-2.0*
Black	50.0	4.1*	3.0	0.0
Filipino	39.7	-6.3**	0.2	-1.7
Latin American	42.8	-3.2	-0.7	-2.6
Arab	46.2	0.2	2.7	1.1
Southeast Asian	39.9	-6.1*	-1.4	-0.5
West Asian	35.8	-10.2**	-2.7	-1.3
Korean	35.0	-11.0**	-2.3	-2.8
Japanese	32.0	-13.8**	-10.0	-4.9
Not part of a racialized group or Indigenous group (ref.)	46.0	...	...	...

... not applicable

* significantly different from reference category (ref.) ($p < 0.05$)

** significantly different from reference category (ref.) ($p < 0.01$)

1. The employer pension plan coverage rate is derived from the T1 Family File using the pension adjustment, which captures whether employees and/or employers made EPP contributions two years after graduation.

2. The Model 1 adjusted gaps were calculated using a logistic regression model estimating the likelihood of being covered by an EPP (yes or no), taking into account the graduates' characteristics, namely age, graduation year, field of study, immigrant status, region of residence, population group and the presence of children. Separate models were estimated for men and women.

3. The Model 2 adjusted gaps were calculated using a logistic regression model with all the characteristics of Model 1, to which the industry sector (NAICS code) was added.

Note: Variances were calculated using bootstrap weights.

Sources: Statistics Canada, integrated Postsecondary Student Information System, T1 Family File and 2016 Census file, 2014 to 2017 cohorts.

Racialized graduates had lower EPP coverage rates than their non-racialized and non-Indigenous counterparts for both women and men. Nevertheless, controlling for graduate characteristics significantly narrowed the gap between the coverage rates of racialized and non-racialized and non-Indigenous graduates. Among women, only four racialized groups maintained a negative gap compared with non-racialized and non-Indigenous graduates: West Asian (-5 percentage points), Arab (-5 percentage points), Latin American (-4 percentage points) and Black (-2 percentage points) graduates. Among men, only Chinese graduates continued to have a lower coverage rate than their non-racialized and non-Indigenous counterparts (-2 percentage points).

Conclusion

Using a database that integrates information on bachelor's degree graduates who earned their degree between 2014 and 2017 with tax data and data from the 2016 Census, this article compares the employment income, unionization rate and employer pension plan coverage rate of racialized graduates and non-racialized and non-Indigenous graduates with a bachelor's degree at the beginning of their careers, namely two years after graduation. These data are important for understanding issues associated with postsecondary graduates' integration into the labour market.

The results show that the employment income, unionization rate and employer pension plan coverage rate of graduates with

a bachelor's degree were often lower among racialized graduates than among non-racialized and non-Indigenous graduates. When controlling for graduate characteristics, the differences narrowed, and sometimes even disappeared.

When the three job quality indicators were considered together, Arab female graduates had the least favourable outcomes compared with non-racialized and non-Indigenous female graduates. Their employment earnings, unionization rate and employer pension plan coverage remained significantly lower than those of their non-racialized and non-Indigenous counterparts, after controlling for graduate characteristics. Among men, only Chinese graduates had

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negative and significant differences in their three job quality indicators after all characteristics were considered.

Some groups, even though their unionization and employer pension plan coverage rates were not significantly different from those of their non-racialized and non-Indigenous counterparts, had substantial negative differences in employment income. Among women, this was the case for West Asian, Black, Korean, South Asian and Latin American graduates. Among men, significant negative differences in employment earnings were also observed among Black, Southeast Asian, Filipino and Korean graduates.

These differences in employment earnings persist even when eliminating the effect of employment income differences related to demographic, education and

industry sector characteristics. The remaining differences could be related to unobserved differences, including discrimination.

Even so, some of these results may change over time because the graduates in this study are at the beginning of their careers. Therefore, a number of these indicators are likely to improve with years of experience, especially in the current labour shortage context.

Note that the concept of job quality is much broader than the three indicators examined in this article. Several studies have looked at frameworks for analyzing job quality, including the European Union^{27,28}, which considers three dimensions in the concept of job quality: quality of earnings, job security and the working environment. Although the PSIS–TIFF–2016 Census data file does not enable a comprehensive

study of the various aspects of job quality, it sheds light on this issue for graduates with a bachelor's degree in each of the 10 racialized groups in Canada, populations rarely examined in detail.

Soon, it will also be possible to link the PSIS and TIFF files to the 2021 Census data to examine outcomes with more recent cohorts of postsecondary graduates, including those who graduated during the COVID-19 pandemic. These data will allow for an examination of how wages and some employment conditions of graduate cohorts of the various racialized groups examined in this article could change over the longer term.

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Data sources, methods and definitions

Data sources and weighting

The Education and Labour Market Longitudinal Platform (ELMLP) allows for the integration of anonymized data from the Postsecondary Student Information System (PSIS) administrative file with other data sources to enhance the PSIS socioeconomic information, as well as to provide insight on students' paths and their labour market outcomes after graduation.

The results of this study are based on the PSIS file, integrated with the TI Family File (TIFF) and 2016 Census data. The rate of integration between the PSIS–TIFF file and the 2016 Census was comparable to the proportion of the Canadian population required to complete the long-form questionnaire, which is 25%, or one in four households. To ensure that the population of interest was not significantly different in the integrated file versus the PSIS–TIFF file, graduate characteristics were studied for both files and were generally very similar (within one percentage point). Although selection bias is always possible, this analysis showed that if there is a bias, it is weak.

This study is based on anonymized information for four cohorts of graduates at the bachelor level²⁹ (which include bachelor's degrees earned at some colleges, but exclude graduates of

medicine, veterinary medicine, optometry, dentistry, law and pharmacy) who finished between 2014 and 2017. To be able to extend the inference of the integrated population to the PSIS population, all data in this article were weighted. The weights are mainly based on the estimated probability of a successful PSIS to census linkage in relation to a PSIS record's characteristics. Bootstrap weights, used in statistical tests in this study, were calculated by repeatedly resampling non-linkage weights.

Selection criteria

The census file is used to identify racialized groups and whether or not they are immigrants or permanent residents. Full-time student status, province of residence, presence of dependent children, employment income, unionization rate and employer pension plan coverage rate, as well as industry sector code (NAICS), were extracted from the TIFF, whereas age,³⁰ sex, Canadian or international student status, and field of study came from the PSIS. Only graduates who did not return to full-time studies within two years after receiving their degree were retained,³¹ on the condition that they were matched to the TIFF and to the 2016 Census file. Two years after graduates received their degrees, their characteristics are studied, and

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only graduates who had paid employment were retained for the profile and the labour market indicators.

Graduates who were registered as international students were also excluded. The PSIS differentiates graduates by whether they registered in their program as international students (from abroad) or as Canadian students (Canadian citizens or permanent residents). The transition from school to the labour market is fundamentally different for these two groups because international students more often have the option of leaving Canada if they receive more attractive job offers from their country of origin—an option that is generally less available to Canadian students. Therefore, combining them would neglect this difference.

To avoid outliers in employment income, graduates were excluded if their employment income was zero or over \$500,000.

Methods

Employment income: Linear regression models were used to estimate employment income (continuous variable). Separate models were estimated for men and women. First, demographic and educational characteristics were included, namely age, age squared, graduation year, field of study, immigrant status, racialized group, region of residence and the presence of children. In a second phase, the NAICS code variable was added to the rest of the variables to account for differences related to the industry sector. Bootstrap weights were used to calculate the variance.

Unionization rates and employer pension plan coverage rates: Logistic regression models were used to estimate the likelihood of being covered by a collective agreement or employer pension plan (yes or no). Separate models were estimated for men and women. First, demographic and educational characteristics were included, namely age, age squared, graduation year, field of study, immigrant status, racialized group, region of residence and the presence of children. In a second phase, the NAICS code variable was added to the rest of the variables. Bootstrap weights were used to calculate the variance.

Definitions

Racialized individuals: People belonging to a group designated as visible minorities. The Employment Equity Act defines visible minorities as “persons, other than Aboriginal peoples, who

are non-Caucasian in race or non-white in colour.” The visible minority population consists mainly of the following groups: South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean and Japanese. Indigenous people have been excluded from the analysis as a focused article on this population will be released in the near future.

Presence of dependent children: Since this information is derived from the T1 FF, some graduates may not be considered parents even if they have one or more children, if the children live in their home country.

Employment income: Employment income includes the wages and salaries of individuals with salaried employee status. The average employment income presented in this article is the average of the four cohorts of graduates (from 2014 to 2017) presented two years after receiving their bachelor's degree (between 2016 and 2019). This average was adjusted for inflation, using the Consumer Price Index, annual average, not seasonally adjusted. The CPI for all products was used (Table 18-10-0005-01 Consumer Price Index, annual average, not seasonally adjusted). Incomes of zero and over \$500,000 were excluded to avoid outliers.

Unionization rate: The unionization rate was derived from the union dues variable in the T1 Family File. If the amount reported for union dues is greater than \$0, the individual is considered to be covered by a collective agreement. Tests were conducted on an alternative definition of unionization (an amount of \$50 or more in union dues) and this did not change the conclusions.

Employer pension plan (EPP) coverage rate: The EPP coverage rate was derived from the pension adjustment variable in the T1 file (TPAJA). The pension adjustment factor calculates the retirement savings accumulated by or on behalf of the member in one year in one or more RPPs or DPSPs and in some non-registered pension plans or arrangements. The pension adjustment factor for one year reduces the maximum amount that the employee can contribute to an RRSP or PRPP for the following year. Unlike the TP4RP variable, which represents the amount of the tax filer's contributions to their employer's pension plan, the TPAJA variable allows both employee and employer contributions to be taken into account in the event that the employee does not contribute to an EPP or profit-sharing plan. If the amount of the pension adjustment factor is greater than \$0, the person is considered to be covered by an EPP.

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Notes

1. Turcotte, 2019; Houle, 2020; Picot and Hou, 2011; Boyd, 2008.
2. Employment Equity Act (<https://lois.justice.gc.ca/eng/acts/e-5.401/index.html>).
3. Eid, 2012; Bertrand and Mullainathan, 2003.
4. Oeropoulos, 2011.
5. At the time this article was written, the 2021 Census data were not available yet.
6. The study pertains to the following population groups: South Asian, Chinese, Black, Filipino, Latin American, Arab, Southeast Asian, West Asian, Korean and Japanese.
7. Indigenous people were excluded from this study. An upcoming study will look at this specific group.
8. The indicators for each graduating cohort taken separately were very similar to those of the weighted average of the four cohorts presented in this article. However, because the samples of certain racialized groups are small, a number of values were missing for each cohort. For more information on the integration of the four cohorts, see the text box Data sources, methods and definitions.
9. This article was preceded by an initial study on the profile of graduates with a bachelor's degree from 2014 to 2017. For more information about the universe and demographic characteristics of these graduates, see the article "[Profile of Canadian graduates at the bachelor level belonging to a group designated as a visible minority, 2014 to 2017 cohorts](#)" published on June 6, 2022.
10. Qiu and Schellenberg, 2022 (1 and 2); Pendakur and Pendakur, 2011.
11. Statistics Canada, 2022.
12. This number of graduates includes those who did not continue their education during the two years after graduating who were able to be integrated into the T1 Family File (the TIFF) and the 2016 Census. It excludes graduates who were international students at the beginning of their postsecondary program. For more information, see the text box Data sources, methods and definitions.
13. For the purposes of this study, the terms "graduates" and "graduates with a bachelor's degree" are used interchangeably and refer to graduates who earned a bachelor's degree from a Canadian educational institution between 2014 and 2017.
14. Picot and Hou, 2011; Boyd, 2008.
15. Based on the 2016 Census data table, Statistics Canada Catalogue no. 98-400-X2016275.
16. The South Asian population group is made up of East Indians, Pakistanis and Sri Lankans.
17. The figures presented here differ slightly from those of Brunet and Galarneau (2022) because the group of "non-racialized" individuals excludes Indigenous people. Also, self-employed workers were removed from the universe of this table. Therefore, it pertains only to employees to be consistent with the universe of the rest of the tables in this article.
18. Brunet and Galarneau, 2022.
19. Just over half of racialized graduates who were immigrants arrived in Canada before the age of 12 (52%). This proportion was lowest for Black immigrants (26%) but varied between 59% and 49% for a number of Asian immigrant groups and between 30% and 46% for Latin American, Arab and Korean immigrant graduates. These proportions were similar based on sex. The age of immigrants upon arriving in Canada can have an impact on their relative success in the labour market. Immigrants who arrive before age 12 will do most of their high school education in a Canadian institution, will become friends with other young Canadians and will become fluent in one of the two official languages. As such, arriving at a younger age may facilitate their entry into the labour market (see Hou and Bonikowski, 2015 and Schaafsma and Sweetman, 2001).
20. These graduates all earned their bachelor's degree from a Canadian institution.
21. The annual employment income of employed graduates includes salaries and wages from the TIFF and excludes incomes of zero and those over \$500,000. Employment incomes were adjusted for inflation and are expressed in 2016 constant dollars. It should be noted that the database used in this study does not contain information about the number of hours or weeks worked, which can affect employment earnings.

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22. Hou and Coulombe, 2010.
23. In some cases, the absence of significant differences may simply reflect the low number of observations, as could be the case for Japanese women, who account for only 0.3% of graduates.
24. This is an estimate of the unionization rate because paying union dues is not associated with the graduate's specific job. Graduates may have changed jobs in their second year after graduation and transitioned from a unionized job to a non-unionized job or vice versa.
25. Qi and Schellenberg, 2022 (1 and 2); Houle, 2020.
26. Using the pension adjustment, instead of the presence of EPP contributions by tax filers, captures cases where only the employers contribute to their employees' pension plan. As was the case for union dues, the EPP coverage rate is an estimate because graduates may have changed jobs in their second year after graduation and moved from a job covered by an EPP to a job not covered, and vice versa.
27. Eurofound, 2016.
28. Chen and Mehdi, 2018.
29. Under the methodology described in "[Technical Reference Guides for the Education and Labour Market Longitudinal Platform \(ELMLP\)—Labour market outcomes for college and university graduates, 2010 to 2017](#)," the definitions of the educational qualification categories were adjusted twice compared with the PSIS to allow groupings to be consistent and homogenous to study the labour market outcomes of graduates: 1) bachelor's degrees or post-baccalaureate non-graduate degrees in the six fields of study of dentistry (DDS, DMD), law (LLB, JD, BCL), medicine (MD), optometry (OD), pharmacy (PharmD, BS, BSc, BPharm) and veterinary medicine (DVM) were classified in their own category called "professional degree" and are not part of this study; 2) some post-baccalaureate non-graduate degrees in education or social work were combined with the undergraduate degree group for more consistency between the provinces and territories.
30. Age is defined as it was reported on December 31 of the calendar year in which the graduate received their degree.
31. This criterion aims to keep only graduates who have the same educational attainment to prevent comparison of graduates with different educational attainments.